



parkinsonsutility.ST25.txt
SEQUENCE LISTING

<110> St. Jude Children's Research Hospital
University of Tennessee Research Corporation
Smeyne, Richard J.
Tharp, Ruby
Smeyne, Michelle
Williams, Robert

<120> Method for Determining Sensitivity to Environmental Toxins and Susceptibility to Parkinson's Disease

<130> 023868.43877

<140> US 10/734,372

<141> 2003-12-12

<150> 60/433,437

<151> 2002-12-13

<160> 71

<170> PatentIn version 3.2

<210> 1
<211> 630
<212> DNA
<213> Mus sp.

<400> 1
atgccgcgt acaccattgt ctacttccca agtcgagggc ggtgtgaggc catgcgcattg 60
ctgctgactg accagggcca gagctggaag gaggaggatgg ttaccataga tacctggatg 120
caaggcttgc tcaagcccac ttgtctgtat gggcagcttc ctaagttga ggatggagac 180
ctcacccctt accaatctaa tgccatcttgc agacaccccttgc gccgctctt ggggctttat 240
ggaaaaaacc agagggaggc cgcccaggatg gatatggtga atgatgggtt agaggacctt 300
cgccgcaaattt atggcaccat gatctacaga aactatgaga atggtaagaa tgactacgtg 360
aaggccctgc ctgggcatttgc gaagccctttt gagacccttgc tgtcccagaa ccagggaggc 420
aaagctttca tcgtgggtga ccagatctcc tttgccgatt acaacttgct ggacctgctg 480
ctgatccacc aagtccctggc ccctggctgc ctggacaact tccccctgct ctctgccttat 540
gtggctcgcc tcagtgcccgc gccccaaatc aaggccctttc tgtccctcccc ggaacatgtg 600
aaccgtccca tcaatggcaa tggccaaacag 630

<210> 2
<211> 350
<212> DNA
<213> Mus sp.

<400> 2
ggccatgcgc atgctgctga ctgaccaggc ccagagctgg aaggaggagg tggtgggcag 60
cttcctaagt ttgaggatgg agacctcacc ctttaccaat gactacgtga aggccctgccc 120

parkinsonsutility.ST25.txt

tgggcatctg aagcctttg agaccctgct gtcccagaac cagggaggca acagatctcc	180
tttgcgatt acaacttgct ggacctgctg ctgatccacc aagtccctggc ccctggctgc	240
ctggacaact tccccctgct ctctgcctat gtggctcgcc tcagtgcccg gcccaagatc	300
aaggcctttc tgtccctcccc ggaacatgtg aaccgtccca tcaatggcaa	350
<210> 3	
<211> 350	
<212> DNA	
<213> Homo sapiens	
<400> 3	
ggccctgcgc atgctgctgg cagatcaggg ccagagctgg aaggaggagg tggtggcag	60
ctccccaaat tccaggacgg agacctcacc ctgtaccaat gactatgtga aggcaactgcc	120
cgggcaactg aagcctttg agaccctgct gtcccagaac cagggaggca acagatctcc	180
ttcgctgact acaacctgct ggacttgctg ctgatccatg aggtccttagc ccctggctgc	240
ctggatgcgt tccccctgct ctcagcatat gtggggcgcc tcagtgcccg gcccaagctc	300
aaggccttcc tggccctcccc tgagtacgtg aacctccca tcaatggcaa	350
<210> 4	
<211> 630	
<212> DNA	
<213> Mus sp.	
<400> 4	
atgccaccat acaccattgt ctacttccca gttcgagggc ggtgtgaggc catgcgaatg	60
ctgctggctg accagggcca gagctggaag gaggaggtgg ttaccataga tacctggatg	120
caaggcttgc tcaagccac ttgtctgtat gggcagctcc ccaagtttga ggatggagac	180
ctcacccctt accaatctaa tgccatcttgc agacaccccttgc gccgctcttt ggggctttat	240
gggaaaaacc agagggaggc cgcccagatg gatatggtga atgatggggt ggaggacctt	300
cgcggcaaat atgtcaccct catctacacc aactatgaga atgtaagaa tgactacgtg	360
aaggccctgc ctggcatct gaaggctttt gagaccctgc tgtcccaagaa ccagggaggc	420
aaagcttca tcgtgggtga ccagatctcc tttgcccatt acaacttgct ggacctgctg	480
ctgatccacc aagtccctggc ccctggctgc ctggacaact tccccctgct ctctgcctat	540
gtggctcgcc tcagtgcccg gcccaagatc aaggcctttc tgtccctcccc ggaacatgtg	600
aaccgtccca tcaatggcaa tggcaaacag	630
<210> 5	
<211> 26	
<212> DNA	
<213> Artificial sequence	
<220>	

parkinsonutility.ST25.txt

<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(26)
<223> Primer

<400> 5
gcacttgcca gcttcaggtg aattca

26

<210> 6
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(26)
<223> Primer

<400> 6
gtcaggtagc ttcaggcaga accaca

26

<210> 7
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(15)
<223> GSTpi2 5' primer

<400> 7
cacctgggcc gctcc

15

<210> 8
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(19)
<223> GSTpi2 3' primer

<400> 8

<210> 9
<211> 25
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(25)
<223> GSTpi2 labeling primer

<400> 9
tcgggctcta tggcaaagac caaca

25

<210> 10
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(16)
<223> GSTp1a/1b 5' primer

<400> 10
tgtgaggcca tgcgca

16

<210> 11
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(21)
<223> GSTp1a/1b 3' primer

<400> 11
tggtaaccac ctcctccttc c

21

<210> 12
<211> 24
<212> DNA
<213> Artificial sequence

<220>

parkinsonsutility.ST25.txt

<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(24)
<223> GSTp1a/1b labeling primer

<400> 12
ctgctgactg accagggcca gagc

24

<210> 13
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(18)
<223> GST alpha yc 5' primer

<400> 13
caggctgagc agggctga

18

<210> 14
<211> 17
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(17)
<223> GST alpha yc 3' primer

<400> 14
gccccgggtcc agctctt

17

<210> 15
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(30)
<223> GST alpha yc primer

<400> 15

parkinsonutility.ST25.txt
attgccctgg ttgaactcct ctaccatgtg

30

<210> 16
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)...(16)
<223> GST alpha GT41A 5' primer

<400> 16
gcaatggccg ggaagc 16

<210> 17
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)...(21)
<223> GST alpha GT41A 3' primer

<400> 17
acctgatgca ctccattctg c 21

<210> 18
<211> 25
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)...(25)
<223> GST alpha GT41A labeling primer

<400> 18
cgtgcac tacttcaatg cccgg 25

<210> 19
<211> 22
<212> DNA
<213> Artificial sequence

<220>

parkinsonsutility.ST25.txt

<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(22)
<223> GST mu(chr1) 5' primer

<400> 19
caggcacctt atattcgaac cc

22

<210> 20
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(18)
<223> GST mu(chr1) 3' primer

<400> 20
cgcaggccac aaagtccct

18

<210> 21
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(26)
<223> GST mu(chr1) labeling primer

<400> 21
cgtgcctgga tgccttccta aacctg

26

<210> 22
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(18)
<223> GST mul1 (chr3) 5' primer

<400> 22

parkinsonsutility.ST25.txt

18

atgccatcct gcgctacc

<210> 23
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(21)
<223> GSTmul (chr3) 3' primer

<400> 23
tccttcctc ctctgtctcc c

21

<210> 24
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(21)
<223> GST mu1(chr3) labeling primer

<400> 24
tggccgcaag cacaacctgt g

21

<210> 25
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(21)
<223> GST mu2(chr18) 5' primer

<400> 25
caccgaatat ttgagcccaa g

21

<210> 26
<211> 20
<212> DNA
<213> Artificial sequence

<220>

parkinsonutility.ST25.txt

<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(20)
<223> 3' GST mu2(chr18) 3' primer

<220>
<221> misc_feature
<222> (1)..(20)
<223> GST mu2(chr18) 3' primer

<400> 26
caaagcgacc catgaagtcc 20

<210> 27
<211> 23
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(23)
<223> GST mu2(chr18) labeling primer

<400> 27
cctggacgcc ttcccaaacc tga 23

<210> 28
<211> 737
<212> DNA
<213> Homo sapiens

<400> 28
ggagttcgc cgccgcagtc ttgcgccacca tgccgccccta caccgtggtc tatttcccag 60
ttcgaggccg ctgcgcggcc ctgcgcatgc tgctggcaga tcagggccag agctggaagg 120
aggaggtggt gaccgtggag acgtggcagg agggctcaact caaagcctcc tgcctatacg 180
ggcagctccc caagttccag gacggagacc tcaccctgta ccagtccaat accatcctgc 240
gtcacctggg ccgcacccctt gggctctatg ggaaggacca gcaggaggca gccctggtgg 300
acatggtaa tgacggcgtg gaggacctcc gctgcaaata catctccctc atctacacca 360
actatgaggc gggcaaggat gactatgtga aggcaactgcc cgggcaactg aagcctttg 420
agaccctgct gtcccagaac cagggaggca agaccttcat tgtggagac cagatctcct 480
tcgctgacta caacctgctg gacttgctgc tgcgtatga ggtccttagcc cctggctgcc 540
tggatgcgtt cccccctgctc tcagcatatg tggggcgcct cagcgccccgg cccaagctca 600
aggccttcctt ggccctccctt gagtacgtga acctccccat caatggcaac gggaaacagt 660

parkinsonutility.ST25.txt

gagggttggg gggactctga gcgggaggca gagttgcct tccttcctcc aggaccaata	720
aaatttctaa gagagct	737
<210> 29	
<211> 24	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(24)	
<223> Forward Primer	
<400> 29	
cctgtaccag tccaataccca tcct	24
<210> 30	
<211> 20	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(20)	
<223> Reverse Primer	
<400> 30	
cctgctggtc cttcccatag	20
<210> 31	
<211> 19	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(19)	
<223> TaqMan Probe	
<400> 31	
cgtcacctgg gccgcaccc	19
<210> 32	
<211> 833	
<212> DNA	
<213> Homo sapiens	

parkinsonsutility.ST25.txt

<400> 32
aaatacatta ggacctggaa ttcagttgtc gagccaggac ggtgacagcg tttacaacaaag 60
cttagagaaa cctccaggag actgctatca tggcagagaa gcccaagctc cactacttca 120
atgcacgggg cagaatggag tccacccgggt ggctcctggc tgcagctgga gtagagttt 180
aagagaatt tataaaatct gcagaagatt tggacaagtt aagaaatgtat gatatatttga 240
tgttccagca agtgccaatg gttgagattt atggatgaa gctgggtcag accagagcca 300
ttctcaacta cattgccagc aaatacaacc tctatggaa agacataaag gagagagccc 360
tgattgatat gtatataaaaa ggtatagcag atttgggtga aatgatcctc cttctgccc 420
tatgtccacc tgaggaaaaa gatgccaagc ttgccttgat caaagagaaa ataaaaaaatc 480
gctacttccc tgcctttgaa aaagtcttaa agagccatgg acaagactac cttgttggca 540
acaagctgag ccgggctgac attcatctgg tggaaacttct ctactacgtc gaggagctt 600
actccagtct tatctccagc ttccctctgc tgaaggccct gaaaaccaga atcagcaacc 660
tgcccacagt gaagaagttt ctacagcctg gcagccccaa gaagcctccc atggatgaga 720
aatctttaga agaagcaagg aagatttca ggtttataa acgcagtcat ggaggccaag 780
aacttgcaat accaatgttc taaagtttgc caacaataaa gtactttacc taa 833

<210> 33
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(24)
<223> Forward Primer

<400> 33
agaaacctcc aggagactgc tatac 24

<210> 34
<211> 17
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(17)
<223> Reverse Primer

parkinsonsutility.ST25.txt

<400> 34
tgcccccgtgc attgaag

17

<210> 35
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(24)
<223> TaqMan Probe

<400> 35
tggcagagaa gcccaagctc cact

24

<210> 36
<211> 976
<212> DNA
<213> Homo sapiens

<400> 36		
tattgagagg aacaaagagc ttataaatac attaggacct ggaattcggt tgtccagcca		60
caaagggtgac agcatttaac aaagcttaga gaaacaccttcca ggagactgct accatggcag		120
agaagcccaa gctccactac tccaatatac ggggcagaat ggagtccatc cggtggctcc		180
tggctgcagc tggagtagag tttgaagaga aatttataaa atctgcagaa gatttgacaa		240
agttaagaaa tgatggatat ttgatgttcc agcaagtgcc aatggtttag attgatggaa		300
tgaagctgggt gcagaccaga gccattctca actacattgc cagcaaatac aacctctatg		360
ggaaagacat aaaggagaaa gccctgattt atatgtatat agaaggtata gcagatttgg		420
gtgaaatgat ctttcttcg cccttactc aacctgagga acaagatgcc aagcttgcct		480
tgatccaaga gaaaacaaaa aatcgctact tccctgcctt tgaaaaagtc tttaagagcc		540
acggacaaga ctaccttggt ggcaacaagc tgagccgggc tgacattcac ctggtggAAC		600
ttctctacta cgtggaaagag cttgactcta gccttatttc cagcttccct ctgctgaagg		660
ccctgaaaac cagaatcagt aacctgccc catgtaaagaa gtttctacag cctggcagcc		720
caaggaagcc tccccatggat gagaaatctt tagaagaatc aaggaagatt ttcaggtttt		780
aataaaccag ccatagaggt caagaacatg caagaccagt attctaaagt tttgcaacaa		840
ttaagtgcct tacctaagtg ttgattgtgc ctgttgtgaa gctaatgaac tctttcaaatt		900
tatatgctaa ttaaataata caactcctat tcacccactt agttaaaatt gatttcttct		960
cattaggatc tgatgt		976

parkinsonutility.ST25.txt

<210> 37
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(22)
<223> Forward Primer

<400> 37
gagccacgga caagactacc tt

22

<210> 38
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(22)
<223> Reverse Primer

<400> 38
aagttccacc aggtgaatgt ca

22

<210> 39
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(21)
<223> TaqMan Probe

<400> 39
ttggcaacaa gctgagccgg g

21

<210> 40
<211> 937
<212> DNA
<213> Homo sapiens

<400> 40
atacacatca ggaggtggcc ttgagaagct gagcggagac cggctagact ttactcaaag

60

aaaccaagag actgttacca tggcaggaa gcccaagctt cactacttca atggacgggg

120

parkinsonsutility.ST25.txt

cagaatggag cccatccggt ggctcttggc tgcagctgga gtggagttt aagagaaaatt	180
tataggatct gcagaagatt tggaaagtt aagaaatgat gggagttga tttccagca	240
agtaccaatg gttgagattt atggatgaa gtttgtacag accagagcca ttctcaacta	300
cattgccagc aaataacaacc tctacggaa agacataaag gagagagccc taattgatat	360
gtatacagaa ggtatggcag atttgaatga aatgatcctt cttctgcctt tatgtcgacc	420
tgaggaaaaa gatgccaaga ttgccttgat caaagagaaa acaaaaagtc gctattccc	480
tgccctcgaa aaagtgtac agagccatgg acaagactac cttgttggca acaagctgag	540
ccgggctgac attagcctgg tggaacttct ctactatgtg gaagagctt actccagcct	600
tatctccaac ttccctctgc tgaaggccct gaaaaccaga atcagcaacc tgcccacggt	660
gaagaagttt ctacagcctg gcagcccaag gaagcctccc gcagatgcaa aagctttaga	720
agaagccaga aagattttca gttttata aagcagccat ggaggctaag aacatgcaag	780
accaatattc taaagtttg caacaatgaa gtgcttact taagtgttga ttgtgcctgt	840
tgtaaagcta atgaaccctt tccaattata tgctaattaa ataataaaaa ctcctatttgc	900
ctaacttaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa	937

<210> 41
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(19)
<223> Forward Primer

<400> 41
gctgaaggcc ctgaaaacc 19

<210> 42
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(20)
<223> Reverse Primer

<400> 42

ggctgccagg ctgtagaaac

<210> 43
<211> 23
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(23)
<223> TaqMan Probe

<400> 43
aatcagcaac ctgcccacgg tga

23

<210> 44
<211> 1317
<212> DNA
<213> Homo sapiens

<400> 44
agctcccgcg cgctagagcc gcctgctggc ctcacccagc cgggaccgct gacctggcgc 60
tttgtgcggc tccaggccctc cgagtggact ccagaaagcc tgaaaagcta tcattggcagc 120
aaggcccaag ctccactatc ccaacggaag aggccggatg gagtccgtga gatgggtttt 180
agctgccgccc ggagtcgagt ttgatgaaga atttctggaa aaaaaagaac agttgtacaa 240
gttgcaggat ggttaaccacc tgctgttcca acaagtgcac atgggttggaa ttgacgggat 300
gaagttggta cagacccgaa gcattctcca ctacatagca gacaagcaca atctcttgg 360
caagaacctc aaggagagaa ccctgattga catgtacgtg gaggggacac tggatctgct 420
ggaactgctt atcatgcac ctttcttaaa accagatgtat cagcaaaagg aagtggttaa 480
catggcccag aaggctataa ttagatactt tcctgtgttt gaaaagattt taagggtca 540
cgacaaagc tttcttggtt gtaatcagct gagccttgca gatgtgattt tactccaaac 600
cattttagct ctagaagaga aaattcctaa tatcctgtct gcatttcctt tcctccagga 660
atacacagtg aaactaagta atatccctac aattaagaga ttcccttgaac ctggcagcaa 720
gaagaagcct cccccgtatg aaatttatgt gagaaccgtc tacaacatct ttggccata 780
aaacaacaca tccatgtgtg agtacatgt tggtccatgt gatggattt tctacagtca 840
tgtcttaatg gatcccagct ctgtcatggc gctatctatg tattaagttt ggtcctaagt 900
tgggtctttt gtgtcaacga gatcatctt tctagaaata tcaacctttt ttgtccagta 960
aataattgtt agggatctt tattggaaaa ctttttttggaa gaggctggta tttaaatgtt 1020
atctgattgg gctactcatg tcctgttagcc agttcatcct cataataaga atggcagga 1080

parkinsonsutility.ST25.txt						
tctctgttc	tctcctgagt	gtctttctac	tctcctgagc	gtctttctgc	tctccttata	1140
ctgttctctt	atccttatcc	cctccagtc	ctgcctaatt	tttagtgttt	aataacaacc	1200
gaatgtctag	taaatgactc	tcctctgagc	tgtaataaaat	aaaatggtag	taatgaatgc	1260
aatcagtatt	agccaaaata	aagaatttat	gagtcattaa	aaaaaaaaaa	aaaaaaaaaa	1317
<210>	45					
<211>	21					
<212>	DNA					
<213>	Artificial sequence					
<220>						
<221>	misc_feature					
<222>	(1)..(21)					
<223>	Forward Primer					
<400>	45					21
ggtaaccacc	tgctgttcca	a				
<210>	46					
<211>	22					
<212>	DNA					
<213>	Artificial sequence					
<220>						
<221>	Not a naturally occurring sequence					
<220>						
<221>	misc_feature					
<222>	(1)..(22)					
<223>	Reverse Primer					
<400>	46					22
gcttcgggtc	tgtaccaact	tc				
<210>	47					
<211>	26					
<212>	DNA					
<213>	Artificial sequence					
<220>						
<221>	Not a naturally occurring sequence					
<220>						
<221>	misc_feature					
<222>	(1)..(26)					
<223>	TaqMan Probe					
<400>	47					26
aagtccccat	ggttgaaatt	gacggg				

parkinsonsutility.ST25.txt

<210> 48
<211> 1161
<212> DNA
<213> Homo sapiens

<400> 48
ctctgagccc tgctcggtt aggccctgtct gcggaatccg caccaaccag caccatgcc 60
atgatactgg ggtactggga catccgcggg ctggcccacg ccatccgcct gctcctggaa 120
tacacagact caagctatga ggaaaagaag tacacgtatgg gggacgctcc tgattatgac 180
agaaggccagt ggctgaatga aaaattcaag ctgggcctgg actttcccaa tctgcctac 240
ttgattgtatgg gggctcacaa gatcacccag agcaacgcca tcttgtgcta cattgcccgc 300
aagcacaacc tgtgtgggaa gacagaagag gagaagattc gtgtggacat tttggagaac 360
cagaccatgg acaaccatat gcagctggc atgatctgct acaatccaga atttgagaaa 420
ctgaagccaa agtacttggaa ggaactccct gaaaagctaa agctctactc agagtttctg 480
gggaagcggc catggtttgc aggaaacaag atcaacttttgc tagattttct cgtctatgat 540
gtccttgacc tccaccgtat atttgagccc aagtgttgg acgccttccc aaatctgaag 600
gacttcatct cccgcttga gggcttggag aagatctctg cctacatgaa gtccagccgc 660
ttcctcccaa gacctgtgtt ctcaaagatg gctgtctgg gcaacaagta gggccttgaa 720
ggccaggagg tgggagttag gagcccatac tcagcctgct gcccaggctg tgcagcgcag 780
ctggactctg catcccagca cctgcctcct cgttccttgc tcctgtttat tcccatctt 840
actcccaaga cttcattgtc cctcttcaact cccccctaaac ccctgtccca tgcaggccct 900
ttgaagcctc agctaccac tatccttcgt gaacatcccc tcccatcatt acccttccct 960
gcactaaagc cagcctgacc ttccttcctg ttagtggttg tgtctgctt aaaggccctg 1020
cctggccctt cgcctgtgaa gctcagcccc gagctgtccc cgtgttgcat gaaggagcag 1080
cattgactgg ttacaggcc ctgctcctgc agcatggtcc ctgccttagg cctacctgat 1140
ggaagtaaag cctcaaccac a 1161

<210> 49
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(20)
<223> Forward Primer

<400> 49
gccctttgaa gcctcagcta

parkinsonsutility.ST25.txt

<210> 50
<211> 23
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(23)
<223> Reverse Primer

<400> 50
tttagtgcag ggaaggtaa tga 23

<210> 51
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(27)
<223> TaqMan Probe

<400> 51
ccactatcct tcgtaacat cccctcc 27

<210> 52
<211> 1050
<212> DNA
<213> Homo sapiens

<400> 52
ctctgagccc tgctcggttt aggcctgtct gcggaatccg caccaccagg caccatgcc 60
atgatactgg ggtactggga catccgcggg ctggcccacg ccatccgcct gctcctggaa 120
tacacagact caagctatga ggaaaagaag tacacgtatgg gggacgctcc tgattatgac 180
agaagccagt ggctgaatga aaaattcaag ctgggcctgg actttcccaa tctgccctac 240
ttgattgtatgg gggctcacaa gatcacccag agcaacgcca tcttgtcta cattgccgc 300
aagcacaacc tgtgtgggaa gacagaagag gagaagattc gtgtggacat tttggagaac 360
cagaccatgg acaaccatat gcagctggc atgatctgt acaatccaga atttgagaaaa 420
ctgaagccaa agtacttgaa ggaactccct gaaaagctaa agctctactc agagttctg 480
gggaagcggc catggttgc aggaaacaag ggcttgaga agatctctgc ctacatgaag 540
tccagccgct tcctcccaag acctgtgttc tcaaagatgg ctgtctgggg caacaagtag 600

parkinsonsutility.ST25.txt

ggccttgaag gccaggaggt gggagtgagg agcccatact cagcctgctg cccaggctgt	660
gcagcgcagc tggactctgc atcccagcac ctgcctcctc gttccttct cctgtttatt	720
cccatcttta ctcccaagac ttcattgtcc ctcttcactc cccctaaacc cctgtcccat	780
gcagggccctt tgaagcctca gctacccact atccttcgtg aacatcccct cccatcatta	840
cccttccctg cactaaagcc agcctgacct tccttcctgt tagtggttgt gtctgcttta	900
aagggcctgc ctggccctc gcctgtggag ctcagcccc agctgtcccc gtgttgcatalog	960
aaggagcagc attgacttgtt tacaggccc tgctcctgca gcatggtccc tgcccttaggc	1020
ctacctgatg gaagtaaagc ctcaaccaca	1050

<210> 53
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)...(20)
<223> Forward Primer

<400> 53 tttaggcctg tctgcggaat	20
-----------------------------------	----

<210> 54
<211> 23
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)...(23)
<223> Reverse Primer

<400> 54 gatgtcccgat taccggatgtatca	23
--	----

<210> 55
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

parkinsonsutility.ST25.txt

<220>
<221> misc_feature
<222> (1)..(21)
<223> TaqMan Probe

<400> 55
cgcaccaacc agcaccatgc c

21

<210> 56
<211> 1572
<212> DNA
<213> Homo sapiens

<400> 56		
ggttggttct gagaaggctt caaggaatag gcagacattt cagcaaggct gctgaggaag		60
gataggctgt gaaaaattagg atgcagcact cctgcccggg tcccgccctcg gggtcgcccag		120
gccctgaacc ccaacgcccgg cattagtcgc gcctgcgcac gcccctgtgg agccgcggag		180
gcaagggacg gagaacgggg cgaggcgga gtcagggcgc ccgcgcgtgg gccccgcccc		240
cttatgtcgg gtataaagcc cctcccgctc acagtttccc tagtcctcga aggctcgaa		300
gcccgtcacc atgtcgtgcg agtcgtctat gggttctcggg tactggata ttctgtggct		360
ggcgcacgcc atccgcctgc tcctggagtt cacggatacc tcttatgagg agaaacggta		420
cacgtgcggg gaagctccctg actatgatcg aagccaatgg ctggatgtga aattcaagct		480
agacctggac tttcctaatac tgccctacact cctggatggg aagaacaaga tcacccagag		540
caatgccatc ttgcgttaca tcgctcgcaa gcacaacatg tgtggtgaga ctgaagaaga		600
aaagattcga gtggacatca tagagaacca agtaatggat ttccgcacac aactgataag		660
gctctgttac agctctgacc acgaaaaact gaagcctcag tacttggaaag agctacctgg		720
acaactgaaa caattctcca tggggatggg gaaattctca tggggatggc gggaaaagct		780
caccttggat gatggatggc cttatgtat cttggatcag aaccgtatat ttgaccccaa		840
gtgcctggat gagttcccaa acctgaaggc tttcatgtgc cggtttgagg ctttggagaa		900
aatcgctgcc tacttacagt ctgatcagtt ctgcaagatg cccatcaaca acaagatggc		960
ccagtggggc aacaagcctg tatgctgagc aggaggcaga cttgcagagc ttgtttgtt		1020
tcatcctgtc cgtaagggtt cagcgtctt gctttgtct tttcaatgaa tagcacttat		1080
gttactggtg tccagctgag tttcttgg gtataaaggc taaaaggaa aaaggatatg		1140
tggagaatca tcaagatatg aattgaatcg ctgcgatact ggcatttccc tactcccaa		1200
ctgagttcaa gggctgttagg ttcatgccc agccctgaga gtgggtacta gaaaaaacga		1260
gattgcacag ttggagagag caggtgtgtt aaatggact ggagtccctg tgaagactgg		1320
gtgaggataa cacaagtaaa actgtggtac tcatggactt aaccggagtt cgaaaaaccgt		1380
cctgtgtaca catggagtt tagtgtgata aaggcagttat ttccagactgg tgggctagcc		1440

parkinsonutility.ST25.txt

aatagagttg ggacaattgc ttactcatta aaaataatag agccccactt gacactattc	1500
actaaaaatta atctggatt taaggccaa cattaaacac aaagctgttg aaataaaaaaa	1560
aaaaaaaaaa aa	1572
<210> 57	
<211> 19	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(19)	
<223> Forward Primer	
<400> 57	
cgctgcata ctggcattt	19
<210> 58	
<211> 18	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(18)	
<223> Reverse Primer	
<400> 58	
gggcttgggc atgaacct	18
<210> 59	
<211> 28	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(28)	
<223> TaqMan Probe	
<400> 59	
cctactcccc aactgagttc aagggctg	28
<210> 60	
<211> 1436	

parkinsonsutility.ST25.txt

<212> DNA
<213> Homo sapiens

<400> 60
ggcgaggccg agcccctcct agtgcttccg gaccttgctc cctgaacact cgaggtggc 60
ggatctt actccttcca gccagtgagg atccagcaac ctgctccgtg cctccgcgc 120
ctgttggttg gaagtgcga cttgaagat cggccgggttgaagtgcga cttgaagat 180
cggcggcgc agcggggccg agggggcggg tctggccta ggtccagccc ctgcgtgccg 240
gaaacccag aggaggtcgc agttcagccc agctgaggcc tgtctgcaga atgcacacca 300
accagcatca tgtccatgac actggggtac tggacatcc gcgggctggc ccacccatc 360
cgcctgctcc tggaaatacac agactcaagc tacgaggaaa agaagtatac gatggggac 420
gctcctgact atgacagaag ccagtggctg aatgaaaaat tcaagctggg cctggacttt 480
ccaaatctgc cctacttgc tggatggctt cacaagatca cccagagcaa cgcattctg 540
tgctacatttgc cccgcaagca caacctgtgt gggagacag aagaggagaa gattcgtgtg 600
gacatttgg agaaccaggc tatggacgtc tccaaatcagc tggccagagt ctgctacagc 660
cctgactttg agaaactgaa gccagaatac ttggaggaac ttccctacaat gatgcagcac 720
ttctcacagt tcctggggaa gaggccatgg tttgttggag acaagatcac cttttagat 780
ttcctcgctt atgatgtcct tgacctccac cgtatatttgc agcccaactg cttggacgcc 840
ttcccaaatc tgaaggactt catctccgc tttgaggct tggagaagat ctgcctac 900
atgaagtcca gccgcttcct cccaaaacct ctgtacacaa gggtggctgt ctggggcaac 960
aagtaatgcc ttgaaggcca ggaggtggga gtgaggagcc catactcagc ctgcgtcccc 1020
ggctgtcag cgcagctgga ctctgcattcc cagcacctgc ctccctgtc ctttcttcctg 1080
tttattccca tctttacccc caagacttta ttgggcctct tcacttcccc taaacccttg 1140
tcccatgcag gcccggaa gcctcagcta cccactttcc ttcatgaaca tccccctccc 1200
aacactaccc ttccctgcac taaagccagc ctgaccccttcc ttccctgttag tggttgtatc 1260
tgctttaag ggcctacctg gcccctcgcc tgtggagctc agccctgagc tgcgtccgtg 1320
ttgcatgaca gcattgactg gtttacaggc cctgctcctg cagcatggcc cctgccttag 1380
gcctacctga taaaataaa gcctcagcca caaaaaaaaaaaaaaaa 1436

<210> 61
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>

parkinsonutility.ST25.txt

<221> misc_feature
<222> (1)..(18)
<223> Forward Primer

<400> 61
gcagcgcagc tggactct

18

<210> 62
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(26)
<223> Reverse Primer

<400> 62
ggttaaagatg ggaataaaaca ggagaa

26

<210> 63
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(24)
<223> TaqMan Probe

<400> 63
atcccagcac ctgcctcc tc

24

<210> 64
<211> 1567
<212> DNA
<213> Homo sapiens

<400> 64
tcctgggcct ctcaaagtct gagccccgt ccgctgatgc ctgtctgcag aatccgcacc 60
aaccaggcacc atgcccattga ctctgggta ctggacatc cgtggctgg cccacgccc 120
ccgcttgctc ctggaataaca cagactcaag ctatgtggaa aagaagtaca cgctgggg 180
cgctccgtac tatgacagaa gccagtggct gaatgaaaa ttcaagctgg gcctggactt 240
tcccaatctg ccctacttga ttgatgggc tcacaagatc acccagagca atgccatcct 300
gctacatttgc gcccgcagg acaacctgtg tggggagaca gaagaggaga agattcgtgt 360
ggacattttg gagaaccagg ttatggataa ccacatggag ctggtcagac tgtgctatga 420

parkinsonutility.ST25.txt

cccaagattt	gagaaaactga	agccaaaata	cttggaggaa	ctccctgaaa	agctaaagct	480
ctactcagag	tttctgggaa	agcggccatg	gtttgcagga	gacaagatca	cctttgtgga	540
tttccttgcc	tatgatgtcc	ttgacatgaa	gcgtatattt	gagcccaagt	gcttggacgc	600
cttccttaaac	ttgaaggact	tcatctcccg	cttgagggt	ttgaagaaga	tctctgccta	660
catgaagtcc	agccaattcc	tccgaggtct	tttgcgggaa	aagtcagcta	catggaacag	720
caaatagggc	ccagtgtgc	cagaagatgg	gagggaggag	ccaacccgtc	tgcctgcgac	780
cctggaggac	agcctgactc	cctggacctg	ccttcctcct	tttccttctt	ttctactctc	840
ttctcttccc	caaggcctca	ttggcttcct	ttcttctaac	atcatccctc	ccgcacatcga	900
ggctcttaa	agcttcagct	ccccactgtc	ctccatcaa	gtccccctcc	taacgtcttc	960
ctttccctgc	actaacgcca	acctgactgc	ttttccctgc	agtgcgtttc	tcttccttga	1020
gaagccagac	tgatctctga	gctcccttagc	actgtcctca	aagaccatct	gtatgccctg	1080
ctcccttgc	tgggtcccta	ccccagctcc	gtgtgatgcc	cagtaaagcc	tgaaccatgc	1140
ctgccatgtc	ttgtcttatt	ccctgaggct	cccttgcactc	aggactgtgc	tcgaattgtg	1200
ggtgttttt	tgtcttctgt	tgtccacagc	cagagcttag	tggatgggtg	tgtgtgtgtg	1260
tgtgtgggg	gtggtgatca	ggcaggttca	taaatttcct	tggtcatttc	tgcctctag	1320
ccacatccct	ctgtccctca	ctgtggggat	tactacagaa	aggtgcctg	tgc当地agttc	1380
ctcactcatt	cgcgctccgt	taggccgtct	agaactggca	tggttcaaag	aggggctagg	1440
ctgatgggaa	agggggctga	gcagctccca	ggcagactgc	cttcttcac	cctgtcctga	1500
tagacttccc	tgatctagat	atccttcgtc	atgacacttc	tcaataaaac	gtatcccacc	1560
gtattgt						1567

<210> 65
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Not a naturally occurring sequence

<220>
<221> misc_feature
<222> (1)..(20)
<223> Forward Primer

<400> 65
cagcaaatacg cgcaggatga 20

<210> 66
<211> 16
<212> DNA

parkinsonsutility.ST25.txt

<213> Artificial sequence

<220>

<223> Not a naturally occurring sequence

<220>

<221> misc_feature

<222> (1)..(16)

<223> Reverse Primer

<400> 66

gggtcgcagg cagcaa

16

<210> 67

<211> 24

<212> DNA

<213> Artificial sequence

<220>

<223> Not a naturally occurring sequence

<220>

<221> misc_feature

<222> (1)..(24)

<223> TaqMan Probe

<400> 67

ccagaagatg ggagggagga gccaa

24

<210> 68

<211> 793

<212> DNA

<213> Homarus gammarus

<400> 68

tgcgccacga tgtccgggaa gtcagccagg agcttgggaa aggaaagcgc gccccgggg

60

ccgggtcccg agggctcgat ccgcacatctac agcatgaggt tctgcccgtt tgctgagagg

120

acgcgtctag tcctgaaggc caagggaaatc aggcatgaag tcatcaatat caacctgaaa

180

aataagcctg agtggttctt taagaaaaat ccctttggtc tggtgccagt tctggaaaac

240

agtcagggtc agctgatcta cgagtctgcc atcacctgtg agtacctgga tgaagcatac

300

ccagggaaag agctgttgcc ggtatgacccc tatgagaaag cttgccagaa gatgatctta

360

gagttttt ctaaggtgcc atccttggta ggaagcttta tttagaagcca aaataaagaa

420

gactatgctg gcctaaaaga agaatttcgt aaagaattta ccaagctaga ggaggttctg

480

actaataaga agacgacctt ctttggtggc aattctatct ctatgattga ttacctcatc

540

tggccctgggt ttgaacggct ggaagcaatg aagttaaatg agtgtgtaga ccacactcca

600

aaactgaaac tgtggatggc agccatgaag gaagatccca cagtctcagc cctgcttact

660

agtgagaaag actggcaagg tttcctagag ctctacttac agaacagccc tgaggcctgt

720

parkinsonutility.ST25.txt

gactatggc tctgaagggg gcaggagtca gcaataaagc tatgtctgat atttccttc	780
agtaaaaaaa aaa	793
<210> 69	
<211> 21	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(21)	
<223> Forward Primer	
<400> 69	
ccgcatctac agcatgaggt t	21
<210> 70	
<211> 20	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(20)	
<223> Reverse Primer	
<400> 70	
tcccttggcc ttcaggacta	20
<210> 71	
<211> 22	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> Not a naturally occurring sequence	
<220>	
<221> misc_feature	
<222> (1)..(22)	
<223> TaqMan Probe	
<400> 71	
tgcccgtttg ctgagaggac gc	22